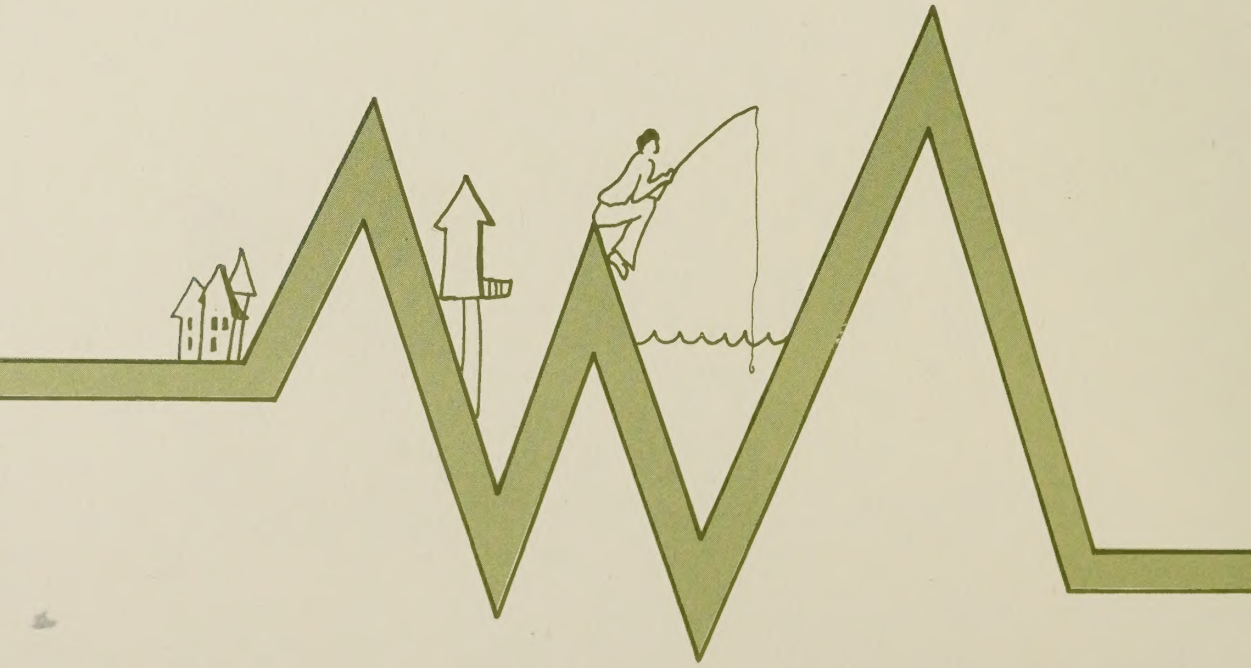
EARTHQUAKE INSURANCE ISSUES

ABAG ASSOCIATION OF BAY AREA GOVERNMENTS

DOES EARTHQUAKE INSURANCE HAVE A PLACE IN OUR PLANNING PROCESS?

This report examines the various issues surrounding earthquake insurance in an objective way--it is not intended to advocate insurance as a solution to many complex problems. An earlier ABAG booklet, Earthquake Issues and Objectives, provides the context in which this booklet should be viewed. This report was prepared to respond to a request by local governments for more information on the implications of earthquake insurance.

Although earthquake insurance is not a policy in its own right, it can help achieve several earthquake preparedness objectives. Such policies include reducing post-earthquake economic disruption, encouraging appropriate recognition of hazardous areas in land development decisions, and encouraging mitigation of hazardous structures or structural components. It must be stressed, however, that insurance cannot force; it can only encourage.



WHAT TYPES OF POLICIES CAN BE IMPLEMENTED WITH EARTHQUAKE INSURANCE?

TO HELP LESSEN THE POTENTIAL FOR SEVERE ECONOMIC HARDSHIP FOLLOWING AN EARTHQUAKE

The most obvious advantage of earthquake insurance is its ability to lessen the economic hardship and associated disruption that accompanies a major earthquake. Individuals can buy protection against large financial losses due to property damage by purchasing insurance. This characteristic leads individuals, acting in their own best interests, to buy the insurance.

TO INCREASE PUBLIC AWARENESS OF EARTHQUAKE PROBLEMS

If earthquake insurance rates depend on both the type of construction and the location, they can increase the amount of information available to the public about earthquake problems. The costs of insurance, if widely purchased, would automatically become a part of the market value of land. It would encourage the use of alternative sites or types of construction, unless the lost savings in insurance costs would be less than the other benefits of the site or type of construction. But because of disinterest and limited sales, public awareness has never increased.

TO HELP ENSURE THAT AN ADEQUATE COMMITMENT IS MADE TO EARTHQUAKE HAZARD REDUCTION

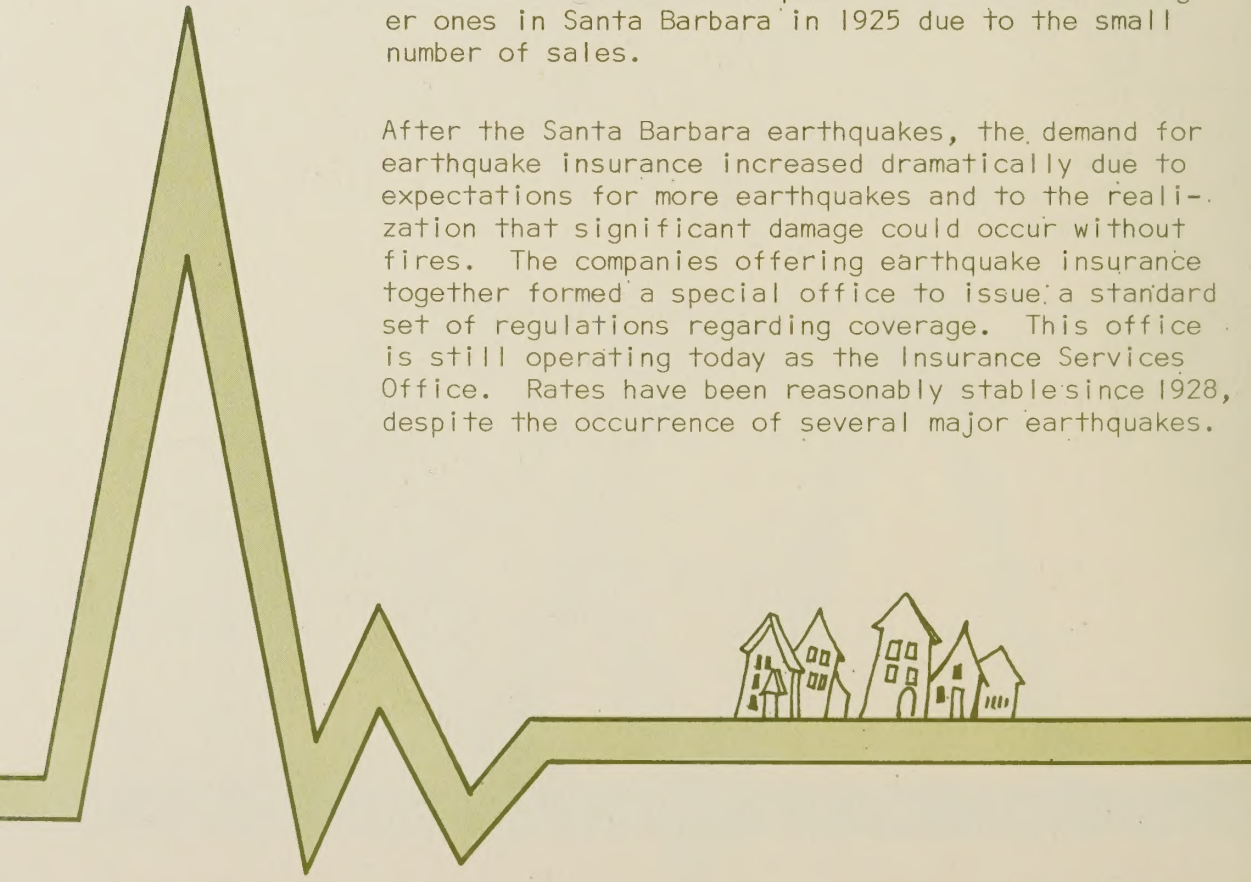
Earthquake insurance can be used to encourage a greater commitment to earthquake hazard reduction if the insurance rate reflects the relative safety of buildings. People would then have an incentive to improve the initial design of their building or make those modifications in existing structures that would result in insurance savings. The number of modifications made would depend, in part, on how each owner balanced possible risks with the cost of modifications. Such a system could be so costly to administer, however, that it is unlikely that insurance will ever be used in this manner in the near future.

PAST

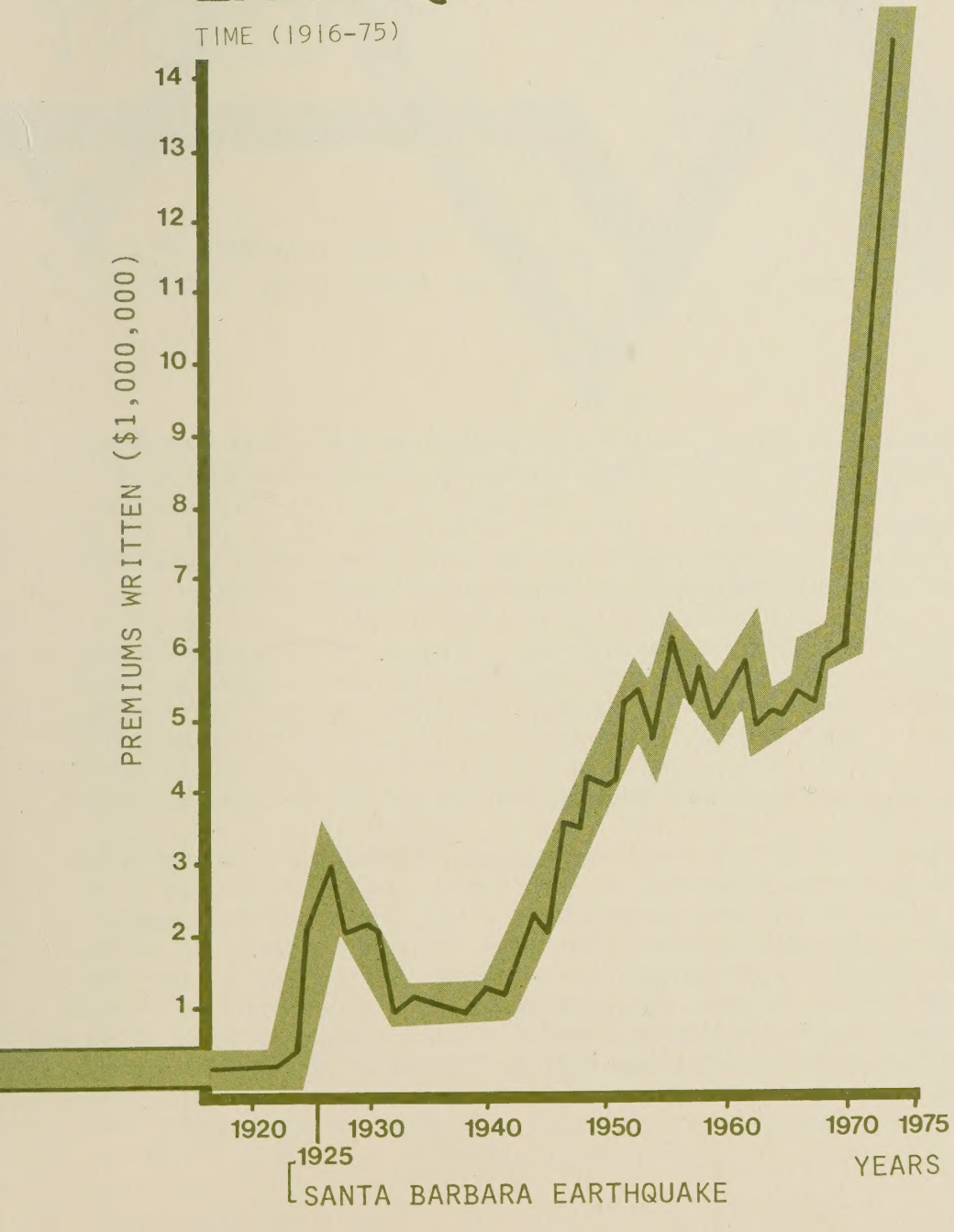
WHAT HAS BEEN THE HISTORY OF EARTHQUAKE INSURANCE?

Earthquake insurance first became widely available in California ten years after the 1906 San Francisco earthquake. Even though the rate was low, (4¢ per $100 coverage with a 5% deductible), little was purchased. This low demand may have been due to the common misconception that the resulting fire, not the earthquake itself, would destroy one's building and that fire insurance would cover the loss. It also may have been due to the lack of public concern for low probability events. The low rates seem to show that the insurance companies shared their view. The insurance companies did not have severe losses in the San Jacinto earthquake of 1918 and the stronger ones in Santa Barbara in 1925 due to the small number of sales.

After the Santa Barbara earthquakes, the demand for earthquake insurance increased dramatically due to expectations for more earthquakes and to the realization that significant damage could occur without fires. The companies offering earthquake insurance together formed a special office to issue a standard set of regulations regarding coverage. This office is still operating today as the Insurance Services Office. Rates have been reasonably stable since 1928, despite the occurrence of several major earthquakes.



CALIFORNIA EARTHQUAKE PREMIUMS



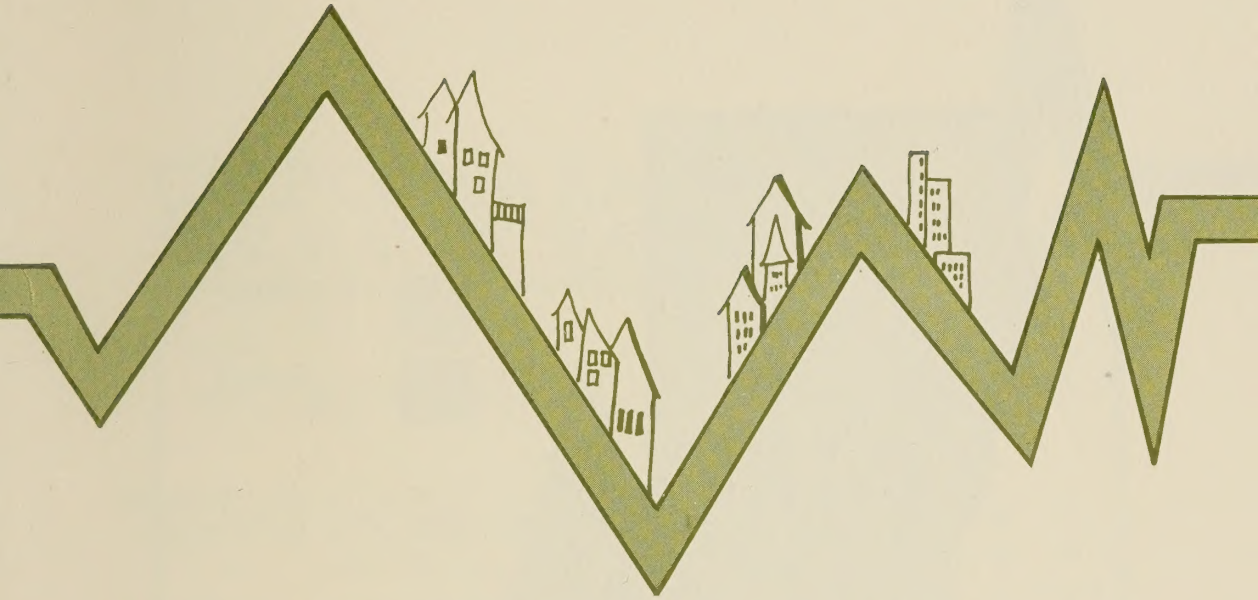
PRESENT

WHAT IS THE CURRENT STATUS OF EARTHQUAKE INSURANCE?

Earthquake insurance is available through private insurance companies. Most firms use the rates developed by the Insurance Services Office. These rates vary with the type of construction and the very general risk zone (1, 2 or 3) in which the building is located. The rates are kept reasonably low by using a mandatory deductible of from 5 to 15%, depending on the type of construction.

Despite the increases in demand for insurance after current major earthquakes, including the 1971 San Fernando one, less than 5% of California homeowners had purchased insurance by 1975 (Kunreuther, in press). Most of the insurance is on commercial and industrial, not residential, properties. People do not tend to protect themselves and their property because the occurrence of damage is rare.

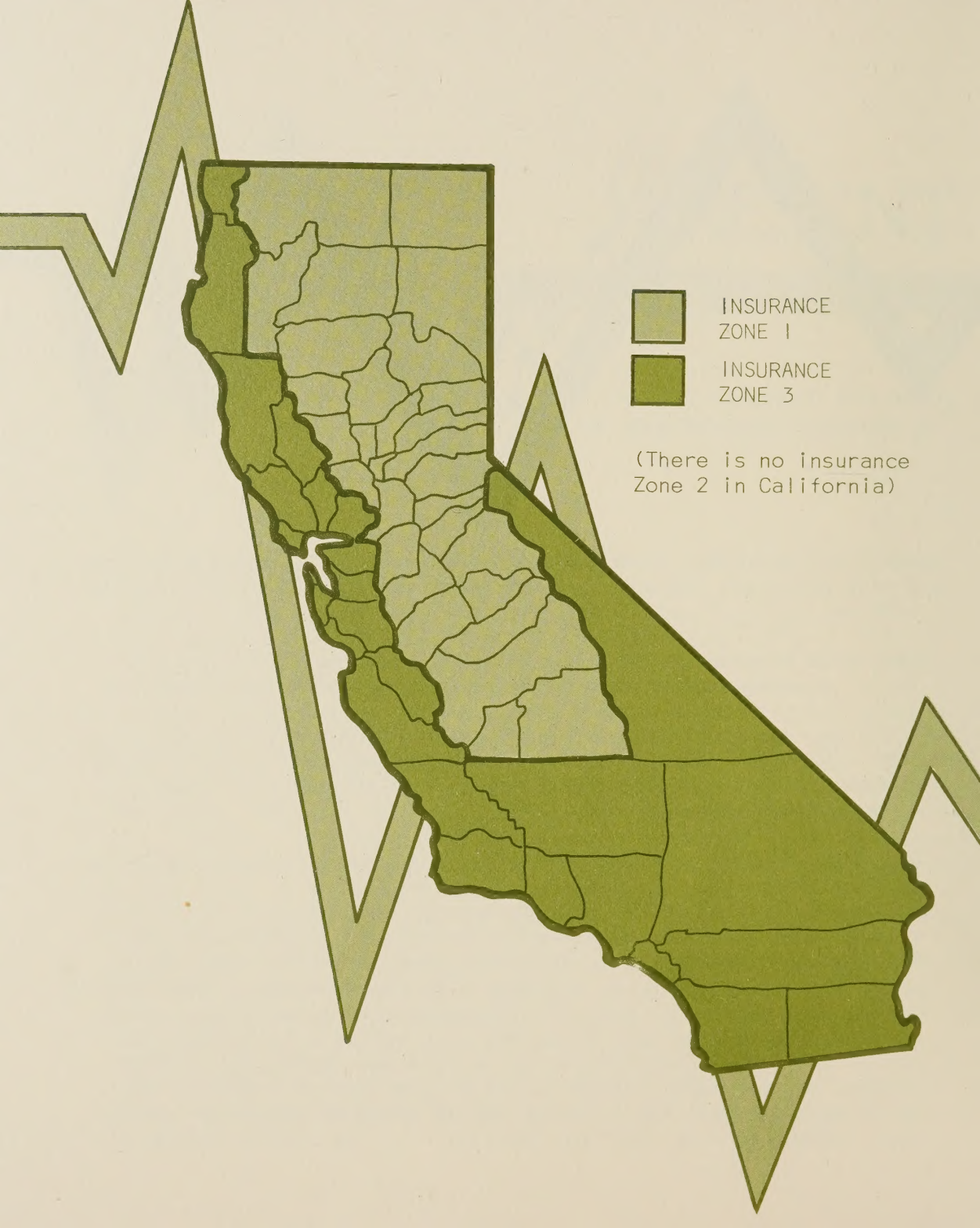
Insurance is not being used to help lessen the potential for severe economic hardship following an earthquake as effectively as it might, since it has been purchased by few. Instead, the Federal government characteristically provides disaster assistance to the uninsured majority of homeowners and small businesses through low interest loans. Because the risk zones are so general and because the rates do not change with structural improvements, the insurance also is not able to encourage appropriate recognition of hazardous areas in land development decisions or to encourage mitigation of hazardous structures.



It is unlikely that demand for the insurance will increase substantially without a State or Federal requirement for a variety of reasons.

Many insurance agents have not actively marketed the coverage. Their insurance companies have been concerned about obtaining adequate reinsurance to protect themselves by spreading the risks. In addition, assets built up in earthquake-free years are taxed as income. Perhaps a designated amount of reserves should not be taxed so long as they were not distributed to stockholders or used in other similar ways.

Even when companies have actively solicited policies by placing ads in newspapers, the response has not been adequate to cover the cost of the ads. In addition, banks and other lending institutions are reluctant to require earthquake insurance as a condition for obtaining a mortgage (such as the requirement for fire insurance); those that did would be at a competitive disadvantage in the lending market. In a recent survey of 1006 homeowners in earthquake-prone areas in California, only 25 owners were actually required to purchase insurance as a condition for a mortgage (Kunreuther, 1977). Because of the uncertainties surrounding potential liability for earthquake damages, few property owners purchase insurance to protect themselves from possible lawsuits.


INSURANCE
ZONE 1
INSURANCE
ZONE 3
(There is no insurance
Zone 2 in California)

CALIFORNIA EARTHQUAKE INSURANCE RATES

CLASS OF RISK	TYPE OF CONSTRUCTION	MANDATORY DEDUCTIBLE	ZONE ($.00/$100 VALUATION) 3	1
I	SMALL WOOD FRAME	5%	.23	.15
II	ONE STORY ALL STEEL	5%	.38	.25
III	SINGLE OR MULTISTORY CONCRETE FRAME	5%	.45	.30
IV	LARGE AREA WOOD FRAMES	5%	.53	.35
V	SINGLE OR MULTISTORY STEEL FRAME	5%	.53	.35
VI	SINGLE OR MULTISTORY CONCRETE FRAME	5%	.60	.40
VII	WALLS OF CAST IN PLACE OR PRECAST REINFORCED CONCRETE	10%	1.12	2.50
VIII	BEARING WALLS OF UNREINFORCED ADOBE	15%	3.75	2.50
SPECIAL RATE	BUILDINGS WHICH CAN RESIST EARTHQUAKES	5%	★	★

NOTES:

(1) Current standard insurance rates are the same throughout the Bay Area. A homeowner whose house sits astride the San Andreas fault pays the same rate as one whose house is several miles from the nearest fault. In addition, buildings are grouped into broad categories. A well constructed home has the same rate as one that has been poorly built or designed.

(2) All rates quoted in this table require 70% coinsurance. Rates in this table are for the Earthquake Damage Assumption Endorsement. All buildings during the course of construction in California are placed in one of the following classifications: I, IV, V, VI, VII, or VIII. Rates given in this table are used with the mandatory percentage deductible. To obtain rates for other optional percentage deductible, reduce rates shown in table for each percent of deductible in excess of the mandatory percentage as follows: 2% on Class I to IV and Class-Special Rate, and 1% on Classes VII and VIII. The maximum percentage deductible permitted is 40%.

★ Rates will be quoted upon application to the Insurance Services Office.

CHANGE

WHAT COULD HAPPEN TO CHANGE THE STATUS OF EARTHQUAKE INSURANCE ?

Several circumstances could lead to a change in the demand, availability, or implementation effectiveness of earthquake insurance.

1 The future development of accurately mapped information on earthquake intensity and damage potential could lead to more reliable rates that varied from one part of the region to another. Such a system would probably be costly to administer, however.

2 Better public information on the risks of earthquakes, another major earthquake, or a prediction of a specific major earthquake could lead to increases in the demand for insurance, although past experience suggests this is not likely.

3 Ordinances requiring the identification and posting of hazardous buildings (such as the one proposed for Los Angeles*) will make owners of these buildings want to protect themselves from possible liability until modifications in the buildings can be made. Such ordinances may change the relationship between the property owner and his insurer.

4 A simple method of recognizing variations in quality of construction may be developed. Insurance rates then could be based on quality, as well as type of construction.

* The proposed L.A. ordinance raises numerous questions: can employees work in a posted building or is this in conflict with the Occupational Safety and Health Act (OSHA)? Will insurance companies continue to supply Workmen's Compensation? Will insurance companies continue to supply liability insurance to the owner of the building? How is an owner's liability to obtain insurance related to property values?


WARNING
THIS BUILDING HAS BEEN DETERMINED BY THE CITY DEPARTMENT OF BUILDING & SAFETY TO BE AN EARTHQUAKE HAZARDOUS BUILDING & AS SUCH MAY BE UNSAFE FOR OCCUPANCY DURING A MODERATE OR SEVERE EARTHQUAKE... IT IS A CRIME TO REMOVE, COVER OR DEFACE THIS SIGN.
SECTION 91.86 CITY CODE


EARTHQUAKE
IN THREE WEEKS

5 Lending institutions, because of an increased awareness of earthquake related hazards, may begin requiring insurance as a condition for a mortgage in some places and for some types of structures.

6 Any major increase in the demand for earthquake insurance will lead to a marked reduction in the availability of adequate reinsurance because the availability of such reinsurance is limited. Reduced reinsurance may result in both the public and the insurance companies pressing the Federal government to reassess its position on insurance. Funds might be provided for reinsurance rather than for disaster relief loans.

7 A law could be passed making earthquake insurance mandatory in California. Mandatory earthquake insurance is not a new idea. This type of program has been discussed extensively over the past decade at both the State and Federal levels (since mandatory insurance would need to be underwritten* by the Federal government). Despite nearly universal praise for the concept of such a program, a law mandating earthquake insurance has not been passed for a number of reasons. Earthquake insurance is widely available to homeowners, is not overly costly, has a reasonable deductible, and is available for commercial and industrial buildings on a case by case basis.

In addition, the only present Federal disaster insurance program, the National Flood Insurance Program, passed in 1968, has had several major administrative problems. The program brought about rapid public awareness of the flooding problem without adequately explaining its significance. The difficulties with this program would have to be conclusively resolved before a similar program for earthquakes could be considered.

* "Underwrite" is an insurance term meaning to assume liability and therefore, to reinsure the private insurance companies in the event of a huge loss.

IN SUMMARY...

Earthquake insurance can be used to help lessen the potential for severe economic hardship following an earthquake, to increase the public awareness of earthquake problems, and to help ensure adequate commitment to earthquake hazard reduction. In spite of the large increase in the number of premiums written in recent years, few people purchase insurance. Current insurance rates are very general -- they are the same throughout the region and vary only according to general types of construction. This situation may change. Demand for insurance may increase, insurance availability may be reduced, lenders may begin to require insurance, or insurance may be required by law.

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OTHER RELATED ABAG PUBLICATIONS

- Land Capability Analysis for Planning and Decision Making - February, 1976
- Hazards Evaluation for Disaster Preparedness Planning - February, 1976
- Regional Earthquake Safety Issues and Objectives - February, 1977

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